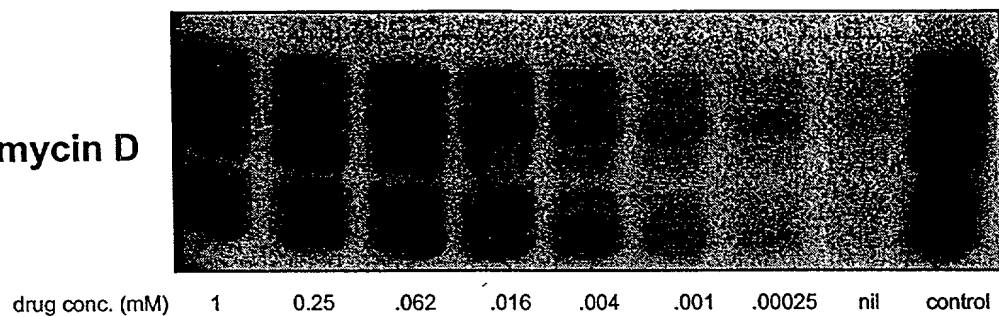
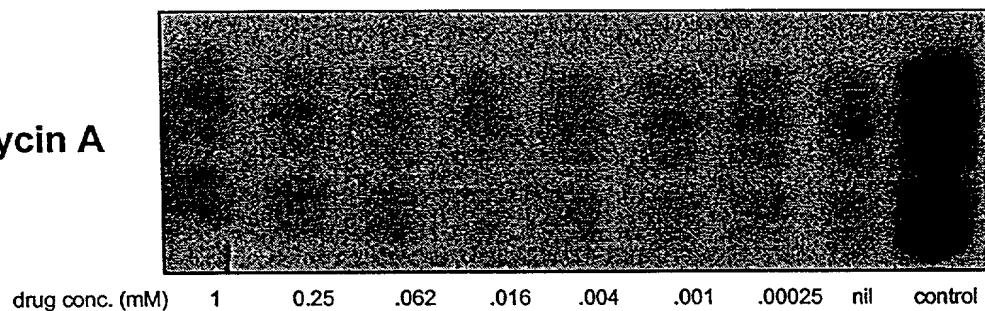


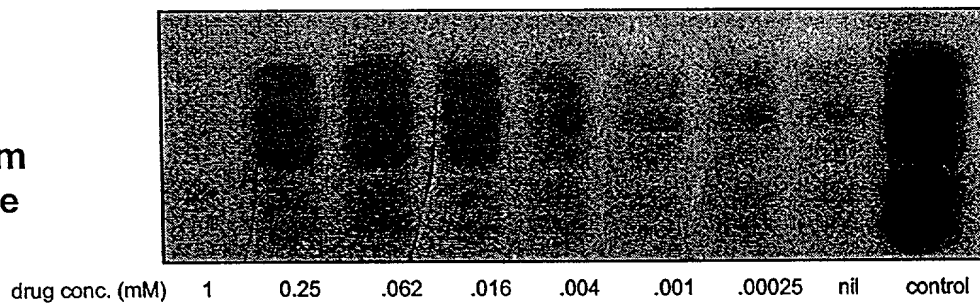
Actinomycin D



Distamycin A



Ethidium Bromide



SSB

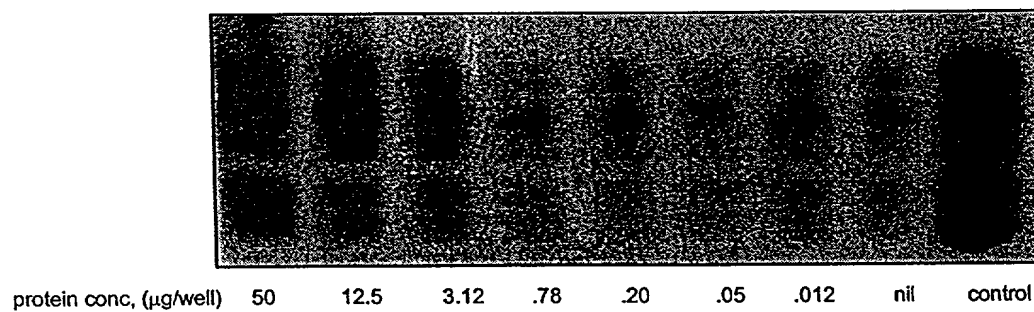
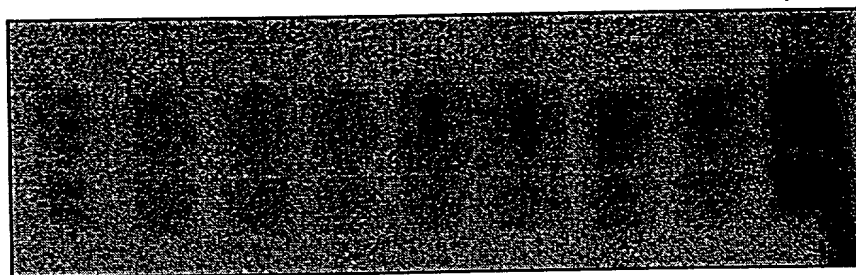


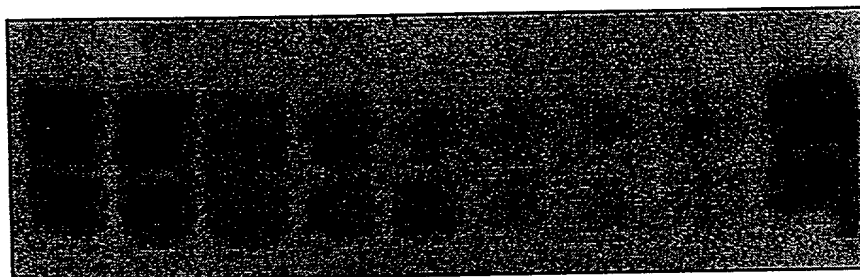
Figure 1. Titration of 4 DNA binders in a DNA hybridization reaction. Dark bands indicate unbound target (higher band intensity = less bound target). The control shows the total intensity of unbound target.

Distamycin A



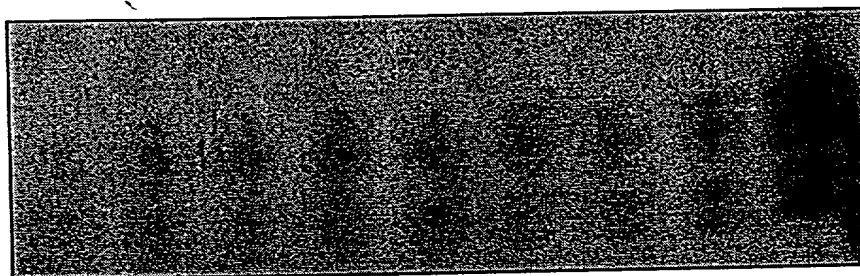
drug conc. (mM) 1 0.25 .062 .016 .004 .001 .00025 nil control

Distamycin A+ Actinomycin D



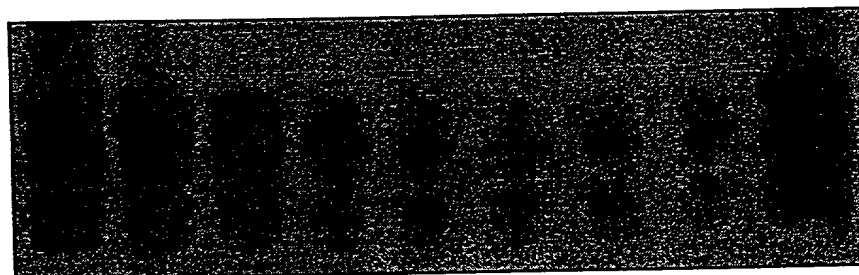
drug conc. (mM) 1 0.25 .062 .016 .004 .001 .00025 nil control

Distamycin A+ Ethidium Bromide



drug conc. (mM) 1 0.25 .062 .016 .004 .001 .00025 nil control

Distamycin A+ SSB



protein conc. (µg/well) 50 12.5 3.12 .78 .20 .05 .012 nil control

Figure 2. Titration of 4 DNA binder combinations in a DNA hybridization reaction. Distamycin A was held constant at 1 mM for those sets with drug combinations.

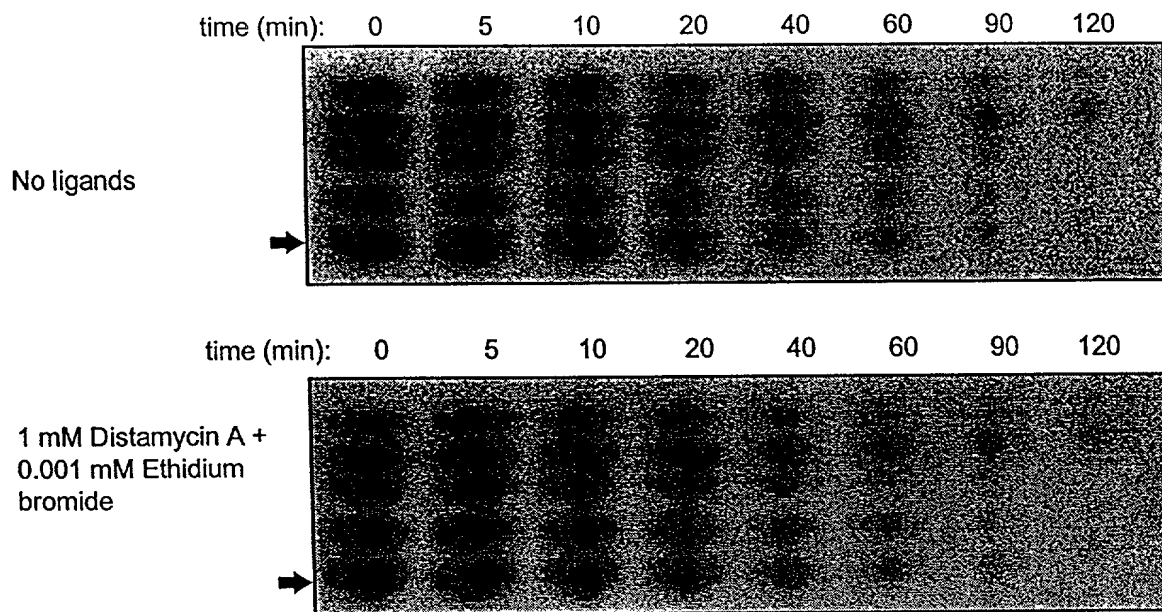


Figure 3a. Time dependence of hybridization in the presence and absence of distamycin A and ethidium bromide. The arrow indicates the perfect matched probe. The hairpin and target sequences are listed in the inset. Dark bands indicate unbound target; higher band intensity, less bound target.

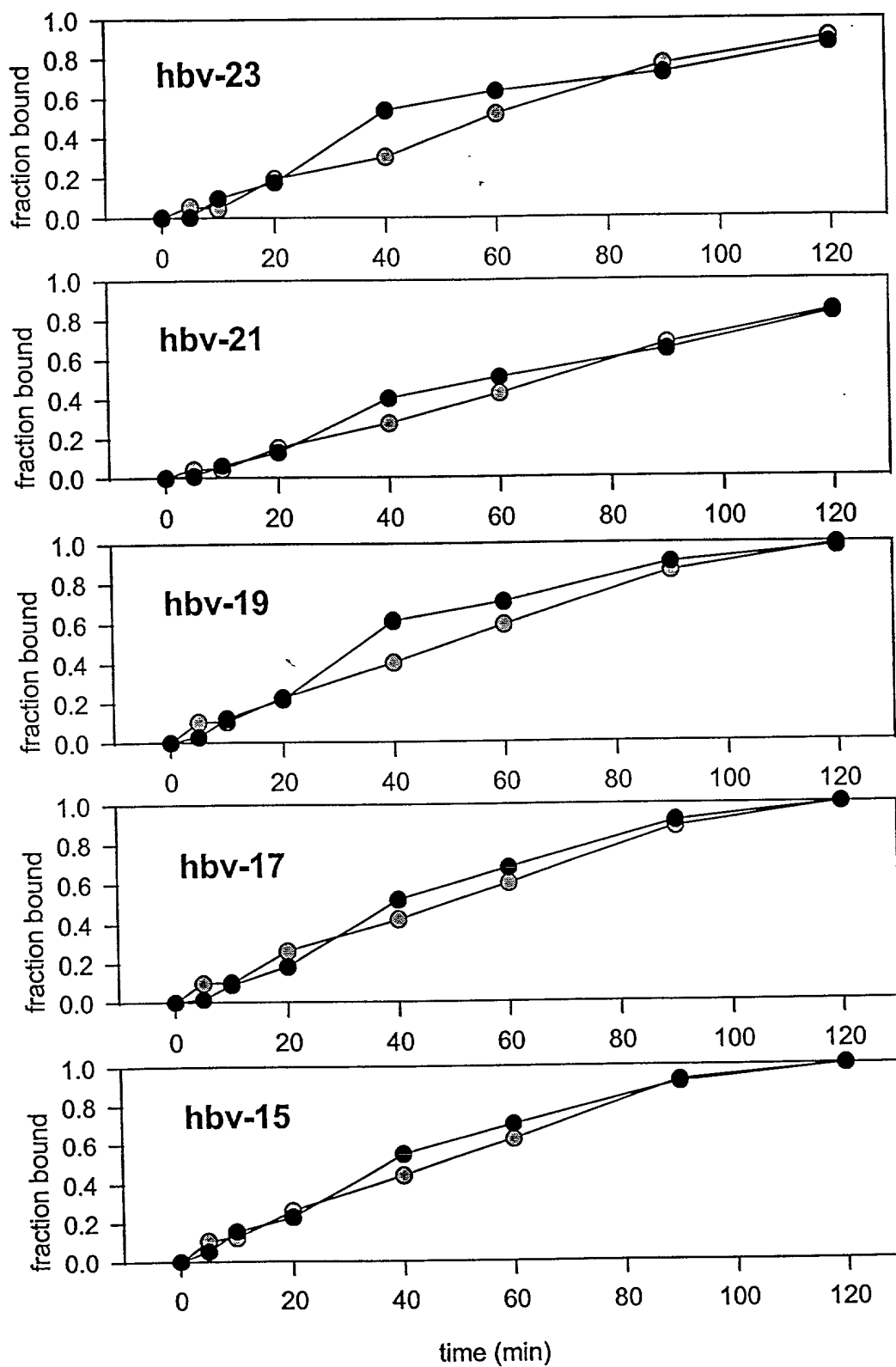
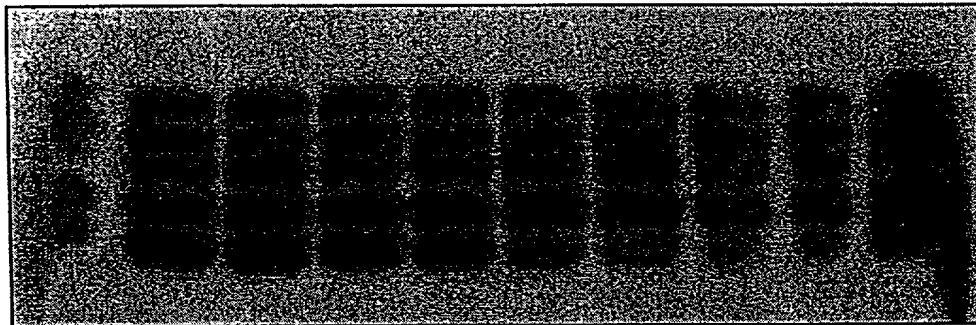


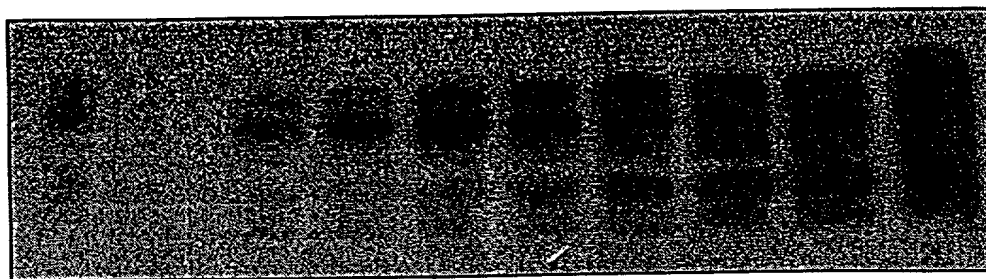
Figure 3b. Plot of normalized binding curves from figure 3. Gray circles indicate hybridization without DNA ligands; black circles indicate hybridization in 1 mM distamycin A and 0.001 mM ethidium bromide.



Salt conc. (M) initial 0 0.01 0.02 0.05 0.1 0.2 0.5 1 control

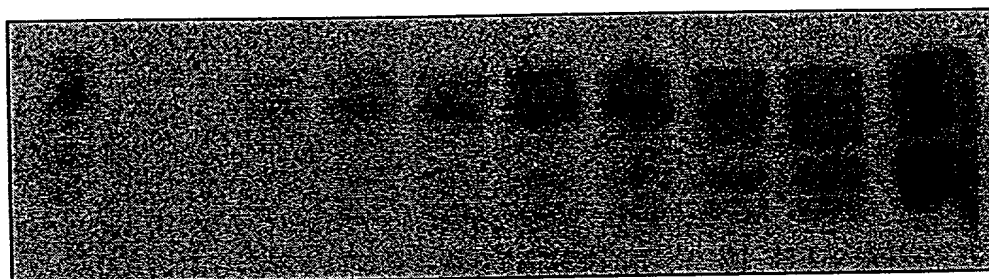
Figure 4. Salt concentration dependence of denaturation at 40% (v/v) formamide. The buffer was 10 mM phosphate, pH 7.2 + specified concentration of NaCl. Wash Incubation time was held constant (1 h).

**No
Distamycin A**



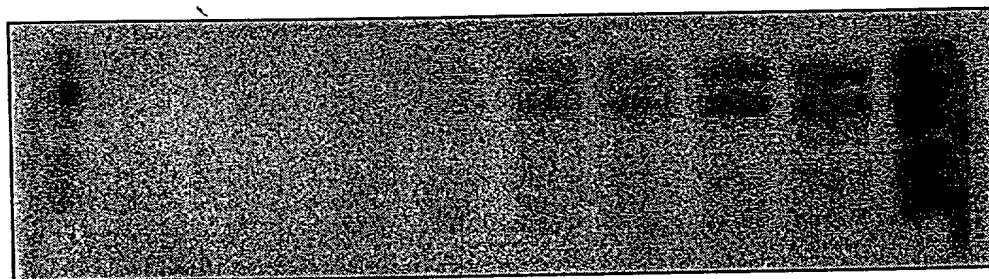
% Formamide initial 0 20 22.5 25 27.5 30 32.5 35 control

**0.062 mM
Distamycin A**



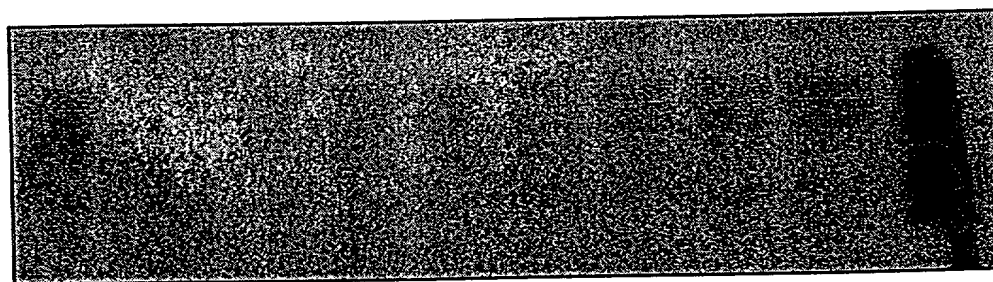
% Formamide initial 0 20 22.5 25 27.5 30 32.5 35 control

**0.25 mM
Distamycin A**



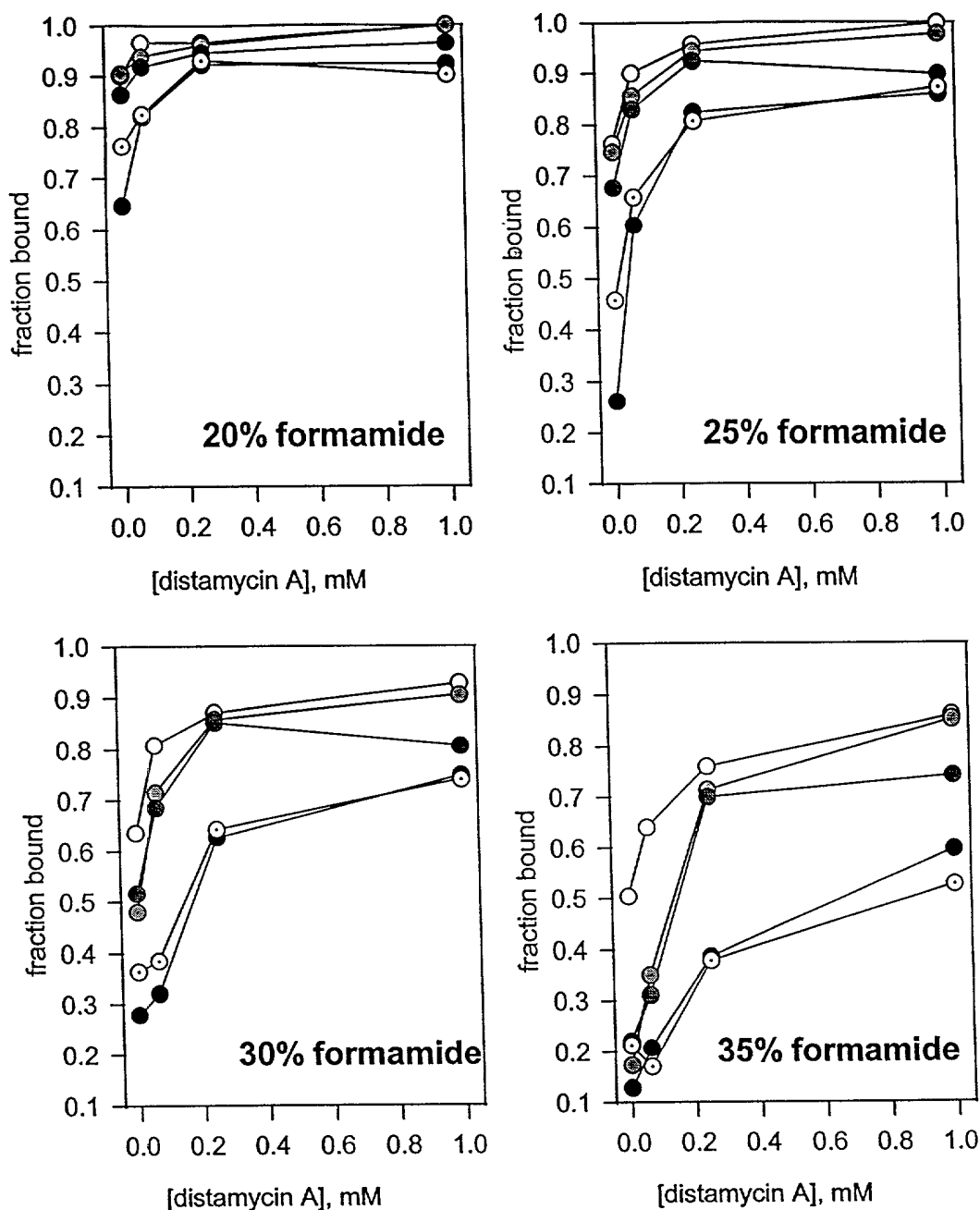
% Formamide initial 0 20 22.5 25 27.5 30 32.5 35 control

**1 mM
Distamycin A**



% Formamide initial 0 20 22.5 25 27.5 30 32.5 35 control

Figure 5a. Formamide concentration is cross-titrated with Distamycin A in the wash buffer. Darker bands indicate a higher degree of dissociation.



SEQUENCE CONSTRUCTS:

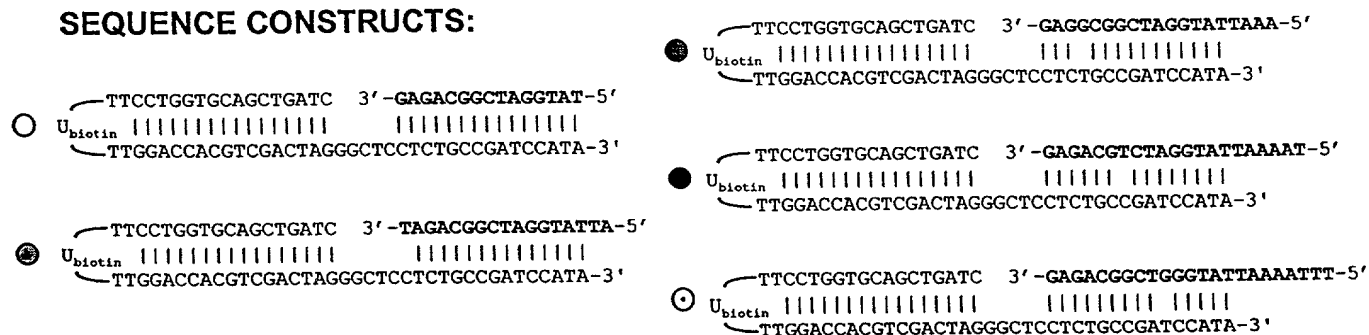
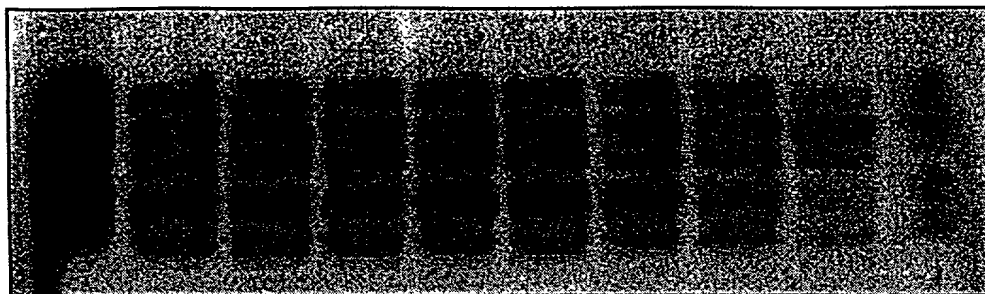


Figure 5b. Fraction of duplex remaining after denaturation as a function of distamycin A concentration at different concentrations of formamide.

**No
Distamycin A**

time (min)



control

60

40

30

20

15

10

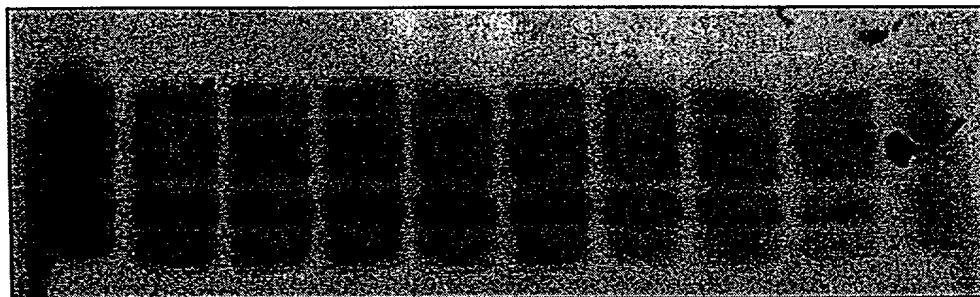
5

0

initial

**0.062 mM
Distamycin A**

time (min)



control

60

40

30

20

15

10

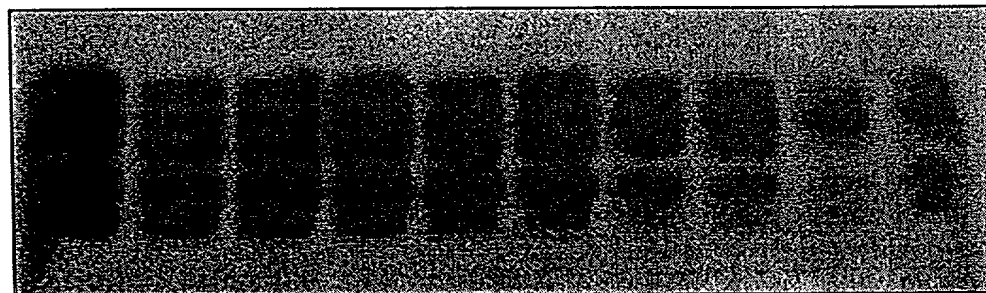
5

0

initial

**0.25 mM
Distamycin A**

time (min)



control

60

40

30

20

15

10

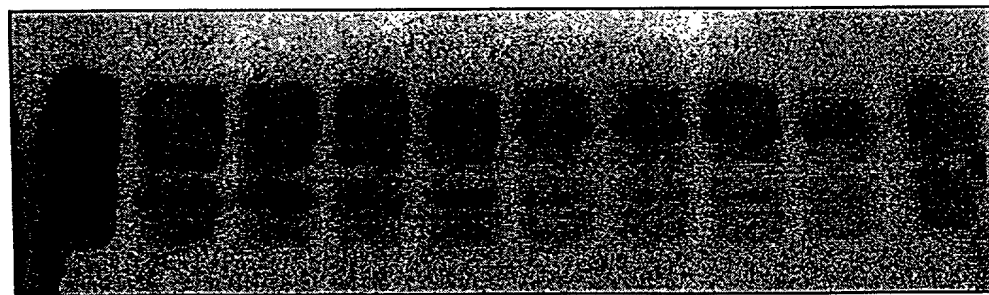
5

0

initial

**1 mM
Distamycin A**

time (min)



control

60

40

30

20

15

10

5

0

initial

Figure 6. Time dependence of denaturation at 40% (v/v) formamide, as a function of Distamycin A concentration. Darker bands indicate higher degree of denaturation.

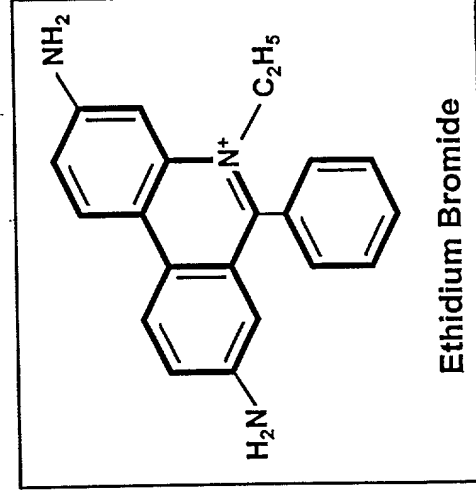
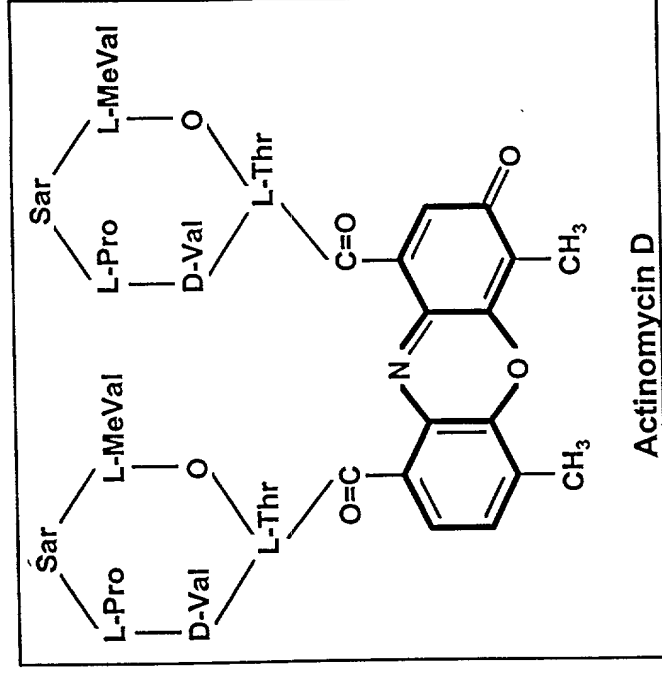
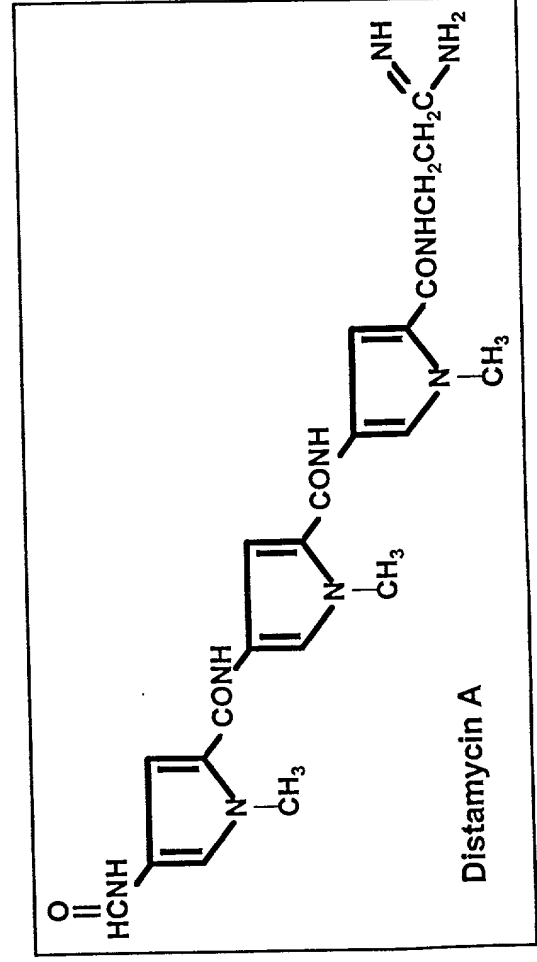
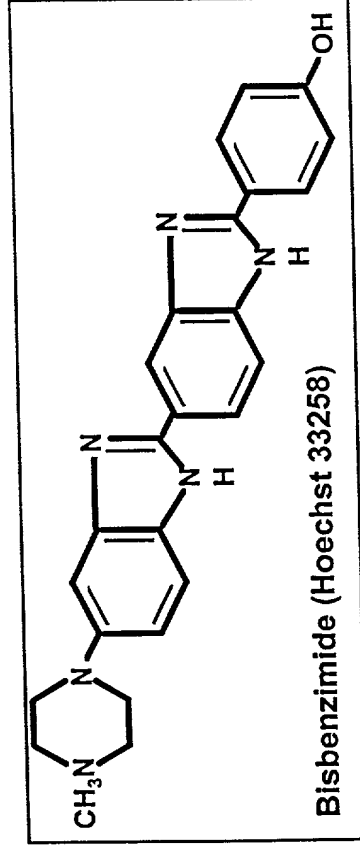
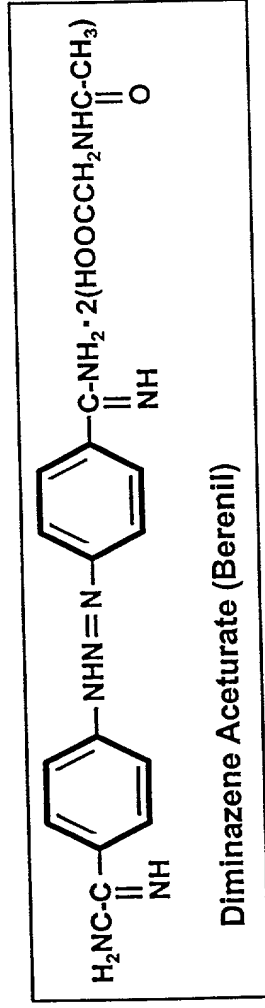


Table 1. DNA binding drugs.